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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,004	04/13/2001	Peter Freyhult	45060-00002	3176

7590 11/18/2003

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EXAMINER	
HARRISON, CHANTE E	

ART UNIT	PAPER NUMBER
2672	8

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,004	FREYHULT, PETER	
	Examiner	Art Unit	
	Chante Harrison	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: Amendment A, filed on 9/15/03.

This action is made FINAL.

2. Claims 1-29 are pending in the case. Claims 1, 11 and 21 are independent claims. Claim 1 has been amended.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Vittorio Castelli et al., U.S. Patent 6,326,965, 12/2001.

As per independent clam 1, Castelli discloses a method for organizing image data forming a picture defined by a plurality of levels, each level including subpicture areas corresponding to different image resolution relative to image resolution levels corresponding to subpicture areas, the method comprising receiving a subpicture element (i.e. view element) having image data (col. 5, ll. 33-35), identify a subpicture

area in which an element may be placed (col. 6, ll. 18-22), the area being in the lowest possible level of the image (col. 1-2, ll. 65-5; Fig. 6), placing the image data of the subpicture element in the identified subpicture area (col. 5, ll. 50-55), upon determination that the amount of image data in the subpicture area exceeds a predetermined maximum amount (i.e. performance costs) (col. 6, ll. 2-12) identifying overlapping subpicture area in a level corresponding to the next higher image data resolution level (i.e. the next transition element comprising frequency synthesis) that overlaps the identified subpicture area (col. 6, ll. 12-37) and placing image data of one or more subpicture elements from the identified subpicture area into one of the overlapping subpicture areas (col. 5, ll. 50-55).

As per dependent claims 2, 12 and 22, Castelli discloses repeating the step of selecting a subpicture element identifying a subpicture area, placing the image data, identifying overlapping subpicture areas and placing one or more subpicture elements for a new subpicture element (col. 5, ll. 60-65).

As per dependent claims 3, 13 and 23, Castelli discloses upon determination that the amount of image data in the subpicture area exceeds a predetermined maximum amount (col. 6, ll. 2-12) identifying overlapping subpicture area in a level corresponding to the next higher image data resolution level (col. 6, ll. 16-37; Fig. 7) redefining the subpicture areas of the picture image (col. 5, ll. 48-65).

As per dependent claims 4, 14 and 24, Castelli discloses upon determination that the number of overlapping subpicture areas is zero (Fig. 7 "711"), redefining the subpicture areas of the picture image (col. 5, ll. 48-65).

As per dependent claims 5, 15 and 25, Castelli discloses placing image data of one or more subpicture elements (col. 5, ll. 50-55).

As per dependent claims 6, 16 and 26, Castelli discloses one of the overlapping subpicture areas comprise the overlapping subpicture area that are capable of receiving image data from the identified subpicture area (col. 6, ll. 18-22) so that the amount of image data in the identified subpicture area is less than the predetermined maximum amount (col. 6, ll. 3-12, 30-37).

As per dependent claims 7, 17 and 27, Castelli discloses selectively redefining the subpicture areas of the picture image (col. 2, ll. 9-10; col. 5, ll. 50-55).

As per dependent claims 8, 18 and 28 Castelli discloses initially receiving a picture scheme for the picture image defining the subpicture areas within the levels (col. 5, ll. 3-5, 33-35), the step of selectively redefining comprising extracting placed subpicture elements (col. 5, ll. 48-55), receiving a new picture scheme (i.e. transition element) for a new picture image (col. 7, ll. 8-25, 43-49) and repeating the selecting a subpicture element (col. 1, ll. 47-49; col. 2, ll. 8-10), identifying a subpicture area (col. 6, ll. 18-22),

placing the image data (col. 6, ll. 32-34), identifying overlapping subpicture areas (col. 5, ll. 50-55) and placing one or more subpicture elements for each extracted subpicture element (col. 5, ll. 60-65).

As per dependent claims 9, 19 and 29, Castelli discloses identifying the overlapping subpicture area capable of receiving the greatest amount of image data from the identified subpicture area (col. 6, ll. 18-22) and upon determination that the amount of image data in the subpicture area exceeds a predetermined maximum amount (col. 6, ll. 2-12) identifying overlapping subpicture area in a level corresponding to the next higher image data resolution level (col. 6, ll. 16-37; Fig. 7) and redefining the subpicture areas of the picture image (col. 6, ll. 18-24; col. 5, ll. 48-65).

As per dependent claim 10, Castelli discloses following the step of identifying overlapping subpicture areas, placing image data of one or more subpicture elements into one subpicture area from one or more overlapping subpicture areas in a next level corresponding to a lower image data resolution (Figs. 6-7).

As per independent claim 11, Castelli discloses a computer product (col. 4, ll. 40-45) for organizing image data forming a picture defined by a plurality of levels, each level including subpicture areas corresponding to different image resolution relative to image resolution levels corresponding to subpicture areas, the computer product comprising receiving a subpicture element (i.e. view element) having image data (col. 5, ll. 33-35),

identify a subpicture area in which an element may be placed (col. 6, ll. 18-22), the area being in the lowest possible level of the image (col. 1-2, ll. 65-5; Fig. 6), placing the image data of the subpicture element in the identified subpicture area (col. 5, ll. 50-55), upon determination that the amount of image data in the subpicture area exceeds a predetermined maximum amount (i.e. performance costs) (col. 6, ll. 2-12) identifying overlapping subpicture area in a level corresponding to the next higher image data resolution level (i.e. the next transition element comprising frequency synthesis) that overlaps the identified subpicture area (col. 6, ll. 12-37) and placing image data of one or more subpicture elements from the identified subpicture area into one of the overlapping subpicture areas (col. 5, ll. 50-55).

As per dependent claim 20, Castelli discloses image data in each subpicture area is individually transportable between memory in the graphics system and the display monitor (col. 6, ll. 38-47).

As per independent claim 21, Castelli discloses a system (Fig. 2) for organizing image data forming a picture defined by a plurality of levels, each level including subpicture areas corresponding to different image resolution relative to image resolution levels corresponding to subpicture areas, the system comprising receiving a subpicture element (i.e. view element) having image data (col. 5, ll. 33-35), identify a subpicture area in which an element may be placed (col. 6, ll. 18-22), the area being in the lowest

possible level of the image (col. 1-2, ll. 65-5; Fig. 6), placing the image data of the subpicture element in the identified subpicture area (col. 5, ll. 50-55), upon determination that the amount of image data in the subpicture area exceeds a predetermined maximum amount (i.e. performance costs) (col. 6, ll. 2-12) identifying overlapping subpicture area in a level corresponding to the next higher image data resolution level (i.e. the next transition element comprising frequency synthesis) that overlaps the identified subpicture area (col. 6, ll. 12-37) and placing image data of one or more subpicture elements from the identified subpicture area into one of the overlapping subpicture areas (col. 5, ll. 50-55).

Response to Arguments

3. Applicant's arguments filed 9/15/03 have been fully considered but they are not persuasive.

With respect to claims 1, 11 and 21, Applicant argues Castelli fails to teach determining that the amount of image data in an identified subpicture area exceeds a predetermined maximum amount nor identifying overlapping subpicture areas in a level corresponding to a next higher image data resolution that overlaps an identified subpicture area.

Castelli teaches ingesting and compressing large images using a wavelet packet tree (col. 5, ll. 1-13) in which view elements correspond to various spatial-frequency subbands (col. 1, ll. 54-55). Castelli also teaches that ingesting and compressing images requires repeating the spatial synthesis and frequency decomposition of the view elements to compress each node at the next depth in the view element hierarchy (Fig. 8; col. 9, ll. 23-60). Castelli further discloses that the view elements have a fixed data size and that each belongs to a node, which corresponds to higher frequency subbands of the image (col. 9-10, ll. 63-2). Thus, it is inherent that Castelli's extraction of view element data which considers the spatial coverage of a view element having a fixed data, determines the maximum amount of image data that can be placed in a subpicture area; and that Castelli's repetitive spatial synthesis and frequency decomposition, which creates a correspondence of view elements to elements in the next highest frequency subband, is an identification of overlappling subpicture areas in

a level of higher image data resolution. Therefore the rejection of claims 1, 11 and 21 is maintained.

With respect to claims 2-10, 12-20 and 22-29, which depend upon their respective independent claims 1, 11 and 21, the rejection in view of Castelli is maintained.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Chante Harrison** whose telephone number is **(703) 305-3937**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Ch
November 14, 2003